

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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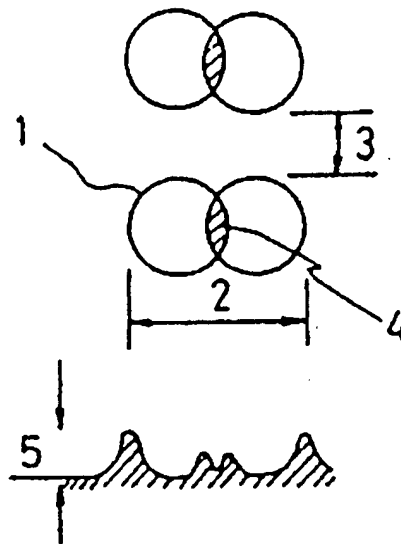
APPLICATION DATE : 14-04-87  
APPLICATION NUMBER : 62091778

APPLICANT : NIPPON STEEL CORP;

INVENTOR : SUEHIRO JUNYA;

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TITLE : ROLL FOR ROLLING



**ABSTRACT :** PURPOSE: To obtain a roll having various patterns and to obtain painted products having different tones by giving the surface of a rolling roll repeated patterns of plural laser beam processed traces as a unit pattern and lapping over each other.

**CONSTITUTION:** A rolling roll is continuously rotated; fine processed traces are sequentially formed on the surface of the roll by a YAG laser beam machine installed over the roll. In that time, the machine is moved by a prescribed distance in the roll longitudinal direction per rotation of the roll. The distance is a pitch in the longitudinal direction of work-traces. A pitch in the peripheral direction is determined by a laser pulse cycle and a roll rotating speed. A unit pattern length 2 is one of important factors specifying patterns as well as work- trace heights 5 and distances 3. Unit patterns 1 having various figures and sizes are formed by changing an output and a focusing condition. Further, multiple and various patterns are given to the roll surface by changing the distance 3 between unit patterns.

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